Courtroom Technology in the 21st Century

Dave Schlueter, Professor of Law
John Specia, Retired District Court Judge

School of Law at St. Mary's University

David A. Schlueter

ph: (210) 431-2212
email: dschlueter@stmarytx.edu

Hardy Professor of Law and Director of Advocacy Programs
B.A., 1969, Texas A & M University
J.D., 1971, Baylor University
LL.M., 1981, University of Virginia

Highlights:

- JAGC Attorney, United States Army (1972-81)
- Legal Counsel, Supreme Court of United States (1981-83)
- Associate Dean, St. Mary's School of Law, 1984-89

Specialties:

Professor Schlueter joined the St. Mary's faculty in 1983. While at St. Mary's, he has taught courses in:

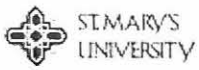
- Evidence
- Trial Advocacy
- Criminal Law and Procedure
- Constitutional Law

Publications:

- He has authored, co-authored, or edited nine books on evidence and criminal procedure and a number of law review articles. His writings have been cited over 750 times by the federal and state courts (including the Supreme Court of the United States) and other legal commentators.
- His writings include: TEXAS RULES OF EVIDENCE MANUAL (5th ed. 1998) (with Wendorf and Barton); FEDERAL EVIDENCE TACTICS (1998) (with Imwinkelried) and MILITARY CRIMINAL JUSTICE: PRACTICE AND PROCEDURE (6th ed., 2004)

Organizations:

- Professor Schlueter is active in the American Bar Association
- Member, American Law Institute
- Since 1988, he has served as the Reporter for the Advisory Committee as the Federal Rules of Criminal Procedure.



School of Law at St. Mary's University
School of Law, St. Mary's University, One Camino Santa Maria, San Antonio, Texas 78228

The Honorable John Specia

John J. Specia Jr. stepped down in January as judge of the 225th District Court in Bexar County, a post he held since May of 1988. Specia, who graduated from the law school in 1975, previously served as master in the 289th Family and Juvenile District Court from 1985 to 1988 and in private practice.

From 1978 to 1985 he was an attorney for the Texas Department of Human Resources Region Nine. He received the Rosewood Gavel award from St. Mary's in 2001.

COURTROOM TECHNOLOGY IN THE 21ST CENTURY

Professor Dave Schlueter
Hon. John Specia

ST. MARY'S UNIVERSITY SCHOOL OF LAW
MARCH 30, 2007

I. INTRODUCTION

II. WHAT IS ALL THIS TALK ABOUT HIGH-TECH COURTROOMS?

A. The Inevitable Trend Toward Technology & Litigation

B. Experiences in State and Federal Courts

III. FROM LOW-TECH, TO MID-TECH, TO HIGH TECH

A. When and How to Use it?

- What do jurors expect?
- David v. Goliath?

B. Butcher Paper, Hard Copies & Dry Erase Boards

C. Document Cameras & White Boards

D. Digital Exhibits; Using Litigation Software

E. PowerPoint Presentations

1. Practical Tips for Incorporating Slide Presentations Into Components of Trial

a. Colors & Fonts

- Look for clear contrasts in color: Dark green, deep blue, dark brown and black are good background colors—with light-colored words.
- Avoid beige on hunter green and beige on cream
- Avoid using all capital letters (Equivalent of shouting)
- For longer text, use non-serif fonts
- Arial font works best for screens using few words.
- Font size smaller than 32 is generally too small to see on monitor.

b. Composition and Content

- Avoid wordiness and visual clutter

c. Linear and Nonlinear Presentations

IV. WHAT WE ARE TEACHING OUR STUDENTS

A. Preparing Our Students to Be Self-Sufficient Litigators

B. A Quick Reference Guide for the Courtroom at St. Mary's (Prepared by Mr. Nathan Roach, JD 2008).

V. SELECTED BIBLIOGRAPHY

A. Books

Rogers, LITIGATION TECHNOLOGY: BECOMING A HIGH-TECH TRIAL LAWYER (Aspen Publishers 2006).

B. Periodicals

Bocchino, "Ten Touchstones for Trial Advocacy," 74 Temple L. Rev. 1 (2001).

Kenny & Jordon, " Trial Presentation Technology: A Practical Perspective," 67 Tenn. L. Rev. 587 (2000).

Heintz, "The Digital Divide and Courtroom Technology: Can David Keep Up With Goliath?, 54 Fed. Comm. L.J. 567 (2002).

Lederer, "Courtroom Technology in the New Millennium, the Virtual Courtroom is Upon Us," ALI-ABA Course of Study Materials; Conference on Life and Health Insurance Litigation (May 2000).

Lederer, "Trial Advocacy: The Road to the Virtual Courtroom? A Consideration of Today's — and Tomorrow's — High-Technology Courtrooms," 50 S.C.L. Rev. 799 (1999).

Ponder, "But Look Over Here: The Use of Technology at Trial Mesmerizes Jurors and Secures Verdicts," 29 Law & Psychol. Rev. 289 (2005).

Webster, "High-Tech Courtroom Visual Presentation System," 80 MI Bar Journal 41 (2001).

Weibel, "Primer on Advanced Courtroom Technology," 21-6 ABIJ 16 (2002).

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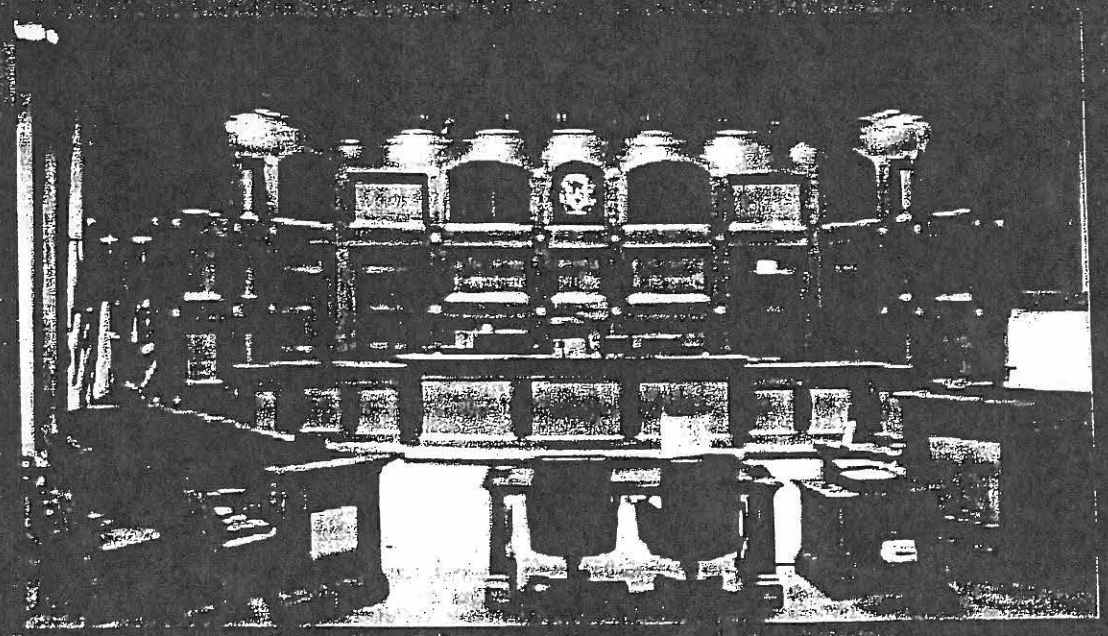
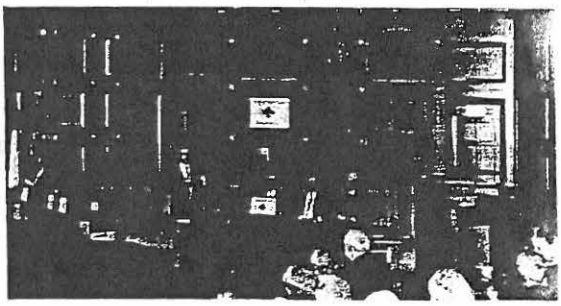


THE COURTROOM AT ST. MARY'S

Quick Reference Guide

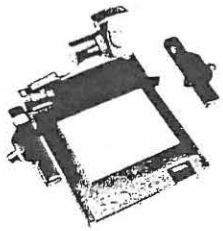
Powerful Technology, Easy Access

Although the Technology Courtroom has many advanced capabilities, it is designed to provide easy access to most functions with minimal training. This document covers basic operation of the system so that advocates can present evidence from either physical materials or computer-based presentations.



Touch-screen Routing

The video display systems in the courtroom are controlled by programmable AMX touch-screens. Video sources are selected by touching the appropriate input on the touch screen panels. The judge and clerk have the ability to preview information presented by counsel before publishing those sources for display to the witness, jury, and audience.

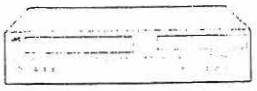


Document Camera

The document camera is a device that will project an image from its display area onto the screens in the courtroom. Sometimes referred to by the trade name "Elmo" these cameras can display printed documents, 3-dimensional objects, and transparencies. The high resolution and color fidelity allows advocates to zoom in to display X-rays and photos in detail or focus on an important paragraph of a document.

Laptop Ports

The lectern, counsel tables, and judge's bench are equipped with laptop ports. These ports allow computers to send their VGA screen to the courtroom's display system. Most laptop ports provide power and audio connections in addition to video.



DVD or VHS video

DVD video can be displayed through the advocate's computer if properly equipped. The courtroom also has a rack-mounted DVD and VHS player that is controllable through the AMX touch-screen system.

Digital Whiteboard

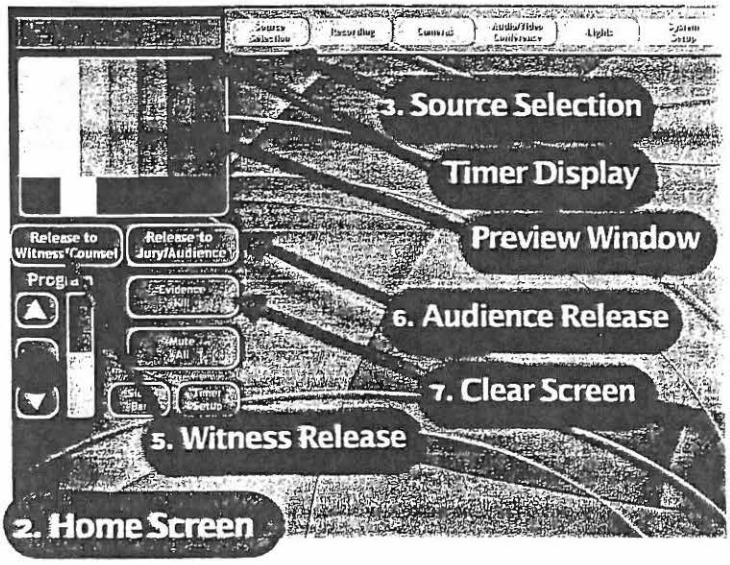
The 3M digital whiteboard is a portable display device that allows presenters to interact with electronic exhibits. The digital whiteboard acts like a traditional whiteboard, but its contents can be displayed on any of the display monitors in the courtroom. Additionally, the digital whiteboard allows computer-based content such as powerpoint presentations to be displayed, annotated, and then saved for later printing or export.

AMX Touch-Screen Routing

Step-by-Step

1. Activate Panel

The video display systems in the courtroom are controlled by programmable AMX touch-screens.
System On: If the system has been activated, to enable a touch-screen, simply touch the screen to activate. One touch will clear the black screen and bring up the St. Mary's logo. A second touch will enable interactive mode.
System Off (System Setup): If the system has not been activated, an administrator password may be required. Please contact St. Mary's University staff for access.

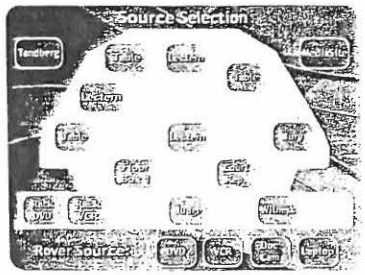


2. The Home screen

This screen is the default screen where most interaction with the system will begin. This screen provides the basic functionality for displaying evidence to the courtroom participants.

3. Source Selection Screen

Press "Source Selection" at the top of the home screen to bring up the Source Selection screen. If no sources are active, all the selections will be grayed out. When an active source is connected the courtroom, the button for that source will become selectable.



4. Activate Source

Select the desired source. Common options are the lectern, counsel table, document camera, or DVD player. Some sources may require an additional selection. For example, to select the document camera, you must first select Rover then select Document Camera from the sub-menu. Once your source has been selected, press "Ok".

5. Release to to Viewers

This step allows the video provided by the source to be viewed on the monitors at counsel tables and at the witness stand. Simply press the "Release to Witness/Counsel" button.
To display sources on the main projector screen, jury box screens, and the plasma display you must perform an additional step. After pressing "Release to Witness/Counsel", then press "Release to Jury/Audience".

6. Clearing the Screen

To clear the screen and reset the source options, press the "Evidence Kill" button. Activating this option clears all video sources. To re-enable video display you must repeat steps 4 through 6.

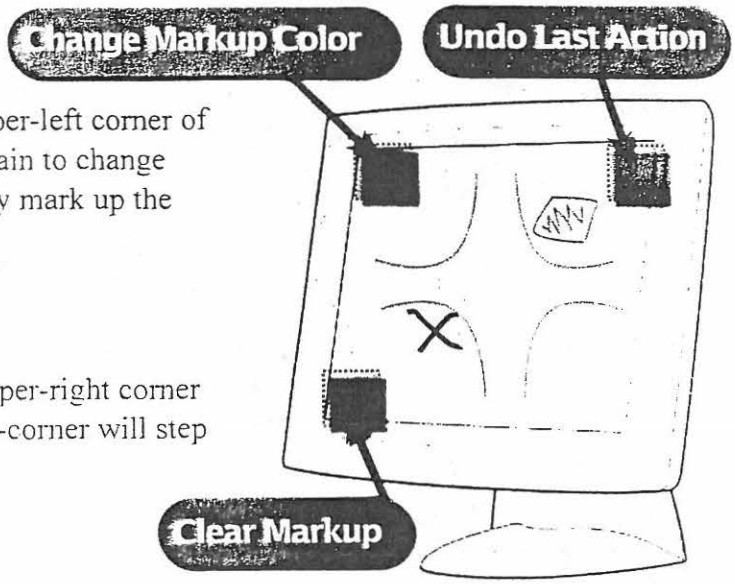
Witness Touch-screen

Overview

The screen at the witness stand is also touch-enabled. Ordinarily, the witness screen simply displays the same video source as the other screens. However, the witness may also draw an overlay on the screen. This overlay is visible to all of the monitors displaying the current video source. The "buttons" to enable this functionality are hidden active areas on the screen.

Step-by-Step

1. Adding Annotations



To begin drawing or marking up the exhibit, touch the upper-left corner of the screen. A colored box will appear. Touch this area again to change colors. Once the desired color is selected, the witness may mark up the exhibit by drawing on the screen with a finger.

WARNING:
Never mark the screen with hard objects. Use only a finger. Any other objects may damage the screen.

2. Undo Errors

To undo the last markup action, press the upper-right corner of the screen. Each press of the "Undo" hot-corner will step back one stroke.

3. Clear Screen

To clear the markup, press the lower-left corner of the screen. This will reset the exhibit to it's original condition and permanently erase all markup.

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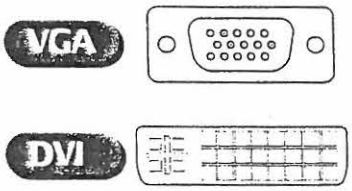
Connecting a Laptop Computer

Step-by-Step

The lectern, counsel tables, and judge's bench are equipped with laptop ports. These ports allow computers to send their VGA screen to the courtroom's display system.

1. Prepare your Computer

The first step is to ensure your computer is configured to connect to the courtroom. Most laptops provide a VGA connector on the back of the computer behind the screen. Other laptops will have a DVI connector; these computers will require a DVI to VGA adapter.

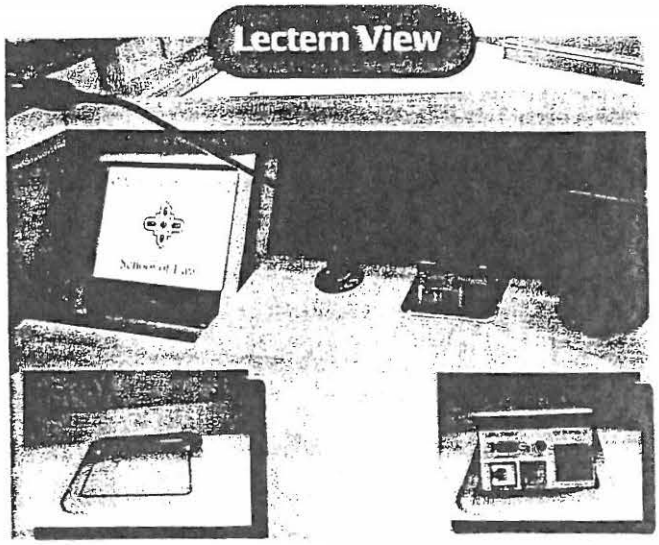


Most laptop computers of recent manufacture will automatically detect the courtroom as an external video display if the computer is powered on after connecting to the courtroom. Your computer should be configured to connect to an external monitor at a resolution of 1024 x 768 pixels. You should check your user manual for the proper sequence for connecting your system.

2. Connect your Computer

Lectern

The lectern has a pop-up connection for laptop computers. If the connection box is depressed, simply press the top of the panel to expose the connections. The lectern has a power connection, VGA connection, mini-plug audio jack, and a data port.

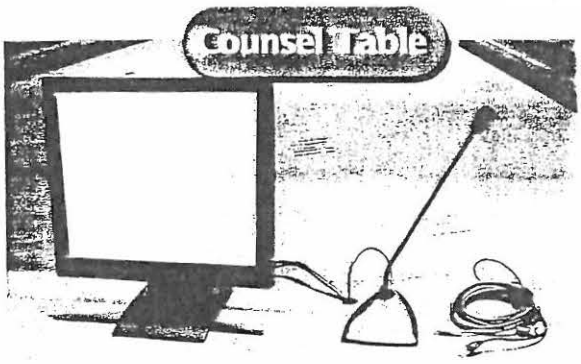


Counsel Table / Judge's Bench

The two counsel tables and the Judge's bench have cable-based connectors for laptops. These connections are provided by a single cable bundle containing VGA, mini-plug audio, and a data cable.

3. Enable Video-Out ("Toggling").

After your computer has been connected to the courtroom and powered on, you need to tell the computer to send the video out in a "video mirroring" configuration. On Windows computers, you may need to press Fn-F8 or Fn-CRT/LCD to display the video. Macintosh computers should automatically display the video, but may require configuration in the Displays section of the System Preferences application. You are now ready to activate your source from the AMX system (see above).

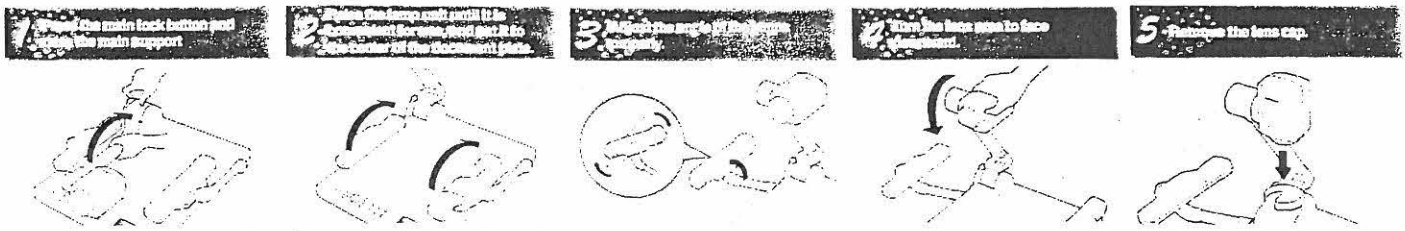


Using the Document Camera

Step-by-Step

1. Deploy the Camera

The procedure for deploying the camera is as follows (from the Samsung User's Manual):

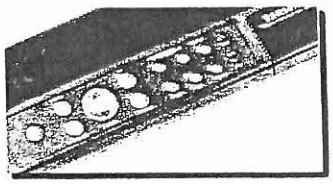


2. Place your Evidence on the Display Surface

The document camera is capable of displaying paper documents, photographs, X-rays, and many small 3d objects. Do not place heavy objects or sharp objects on the surface. If using paper documents, refrain from marking on the documents with markers that may bleed through and stain the display surface.

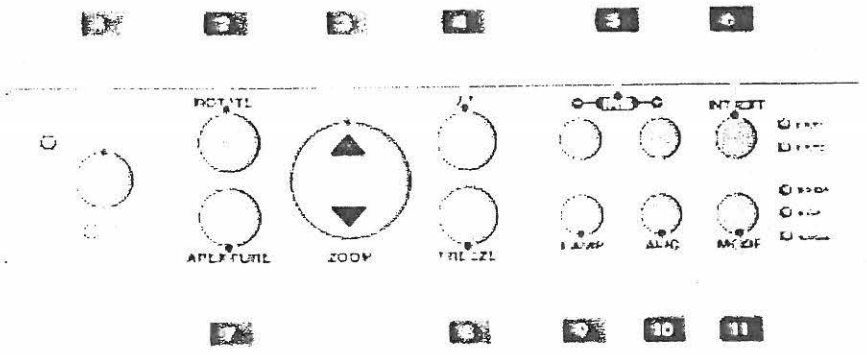
3. Adjust the Image

The front panel of the document camera has several controls for adjusting the viewable image sent to the courtroom. (See Panel Diagram Below.)



1. Power Button: Turns the camera on and off.
2. Rotation Control: Press to rotate the image.
3. Zoom: The Up and Down areas zoom in and out. The system will auto-focus after zoom is complete.
5. Iris: Controls brightness manually. Ordinarily, you should use the AWC function instead
9. Lamp: Turns on the side lamps, or underside lamp. Normally these can remain off.
10. AWC: Automatic color control and brightness. Press to allow system to auto-adjust.

Panel Diagram



4. Display the source

You are now ready to activate your source from the AMX system (see above).

Playing DVD and VHS Video

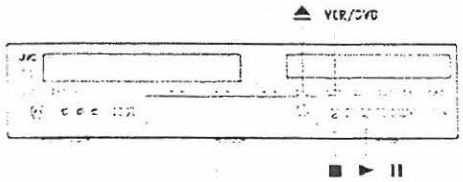
Overview

There are three ways to play back video in the courtroom. The first is to play video from your laptop computer. This has the advantage of being able to handle a wide variety of formats from DIVX to WMV to DVD, depending upon your computer's configuration. Second, DVDs can be played from the video deck built in to the courtroom rover. Finally, video can be played from the rack-based DVD player in the courtroom's equipment closet. This tutorial will cover the rover playback method, although rack playback is very similar.

Step-by-Step

1. Place the DVD disc or VHS tape in the player.

The DVD player is located in the portable rover. Please ask a staff member for access. Press the eject button corresponding to the media format you intend to use. You may then place the tape or disc in the unit and close the tray if needed.

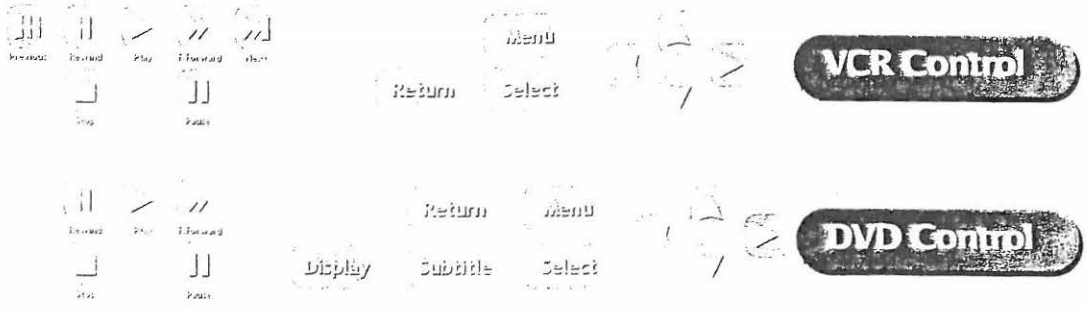


2. Select the source from the AMX screens.

As described in the AMX section, select Rover then select DVD or VHS for playback.

3. Operate playback controls from the AMX system.

Playback control should be performed from the touch-screens, not from the hardware device itself. You will see a screen interface similar to the one below for controlling the DVD and VCR unit. The controls use the standard icons for play, stop, pause, rewind, etc. and are labeled in the interface. Be sure to select "Release to Witness/Counsel" and "Release to Jury / Audience" to direct the output to the courtroom's primary displays.



3M Digital Whiteboard

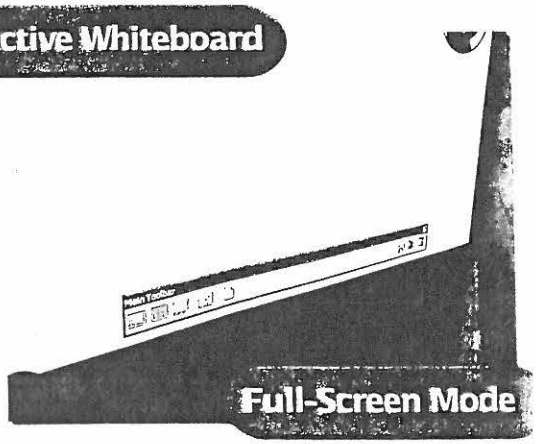
Overview

The digital whiteboard is one of the most versatile pieces of equipment in the courtroom. At the most basic level, this device acts like a traditional whiteboard. Unlike traditional whiteboards, however, no ink-based markers should be used. Instead, an electronic stylus is used to create electronic annotations. These annotations can then be routed to any of the display devices in the courtroom using the AMX touch-screen controllers. Although the included eBeam software is capable of many advanced functions, this tutorial covers basic markup and annotation. Please see the 3M documentation or a courtroom administrator for more advanced information.

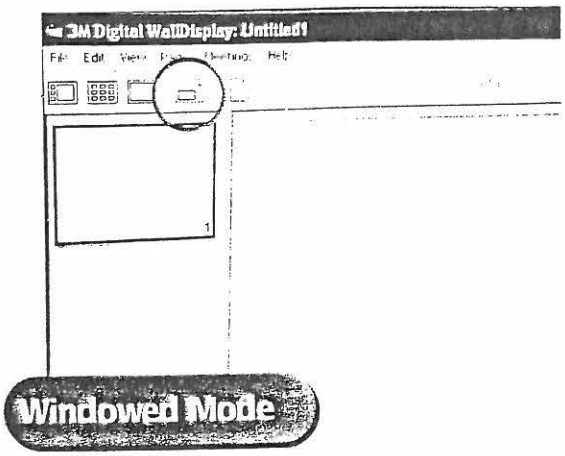
Preparing the Whiteboard

1. Ensure the Digital Whiteboard is Active.

If you do not see a picture on the whiteboard, the system may not be powered on or properly connected. If you see a windows desktop, or a screen other than those pictured in this tutorial, the eBeam software may not be activated. Please do not attempt to troubleshoot the whiteboard system. Contact an administrator to ensure proper setup.



2. Ensure the Digital Whiteboard is in Full-Screen Mode



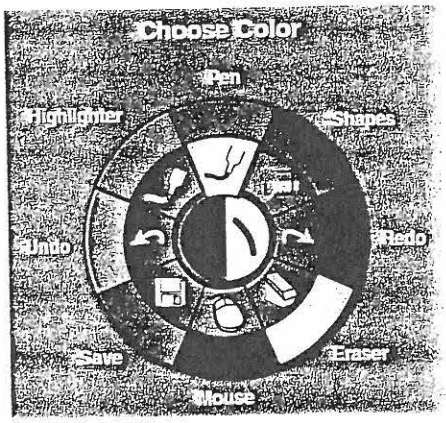
The "home screen" for the digital whiteboard is a blank white canvas with a Main Toolbar at the bottom and a multi-colored function wheel to the right.

The eBeam software also has a "windowed" mode that allows for windows-like operation but is less than ideal for jury presentation. To return to full-screen mode, use the stylus to press the full-screen button in the windowed toolbar. This button is the fourth from the right, circled in blue in the "Windowed Mode" screen capture.

Using the Whiteboard

1. Select a Tool from the Function Wheel

Use the stylus to select a tool from the function wheel. The available tools are in the inner ring. These tools are discussed below in counter-clockwise order from the 12 o'clock position of the wheel.

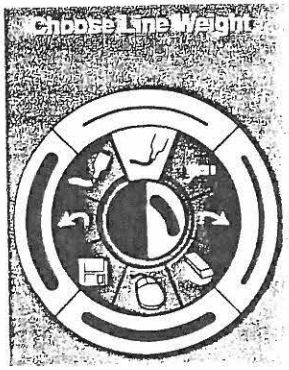


Pen: This is the primary drawing tool. You may select a pen color by pressing the left side of the center bulls-eye to enter color selection mode. Then press the desired color on the outer ring of the color wheel. To change the width of the pen, press the right side of the center bulls-eye and then select a line width from the outer ring of the wheel.

Highlighter: This tool functions like a normal highlighter, applying a semi-transparent color to areas of the whiteboard.

Undo: Tap Undo to remove the last markup applied.

Save: Advanced function.



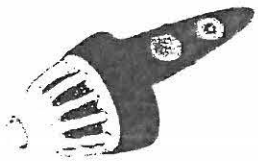
Mouse: Advanced function.

Eraser: Allows the stylus to act as an eraser, removing markup wherever the stylus passes.

Redo: Recreates markup removed by the Undo command. Greyed out unless a previous Undo has been performed.

Shapes: Allows the stylus to create simple geometric primitives.

2. Perform Markup



Once you have selected a tool, you can use the stylus as an electronic pen. Remember, use only the electronic stylus. The stylus tip draws and also acts as a left mouse button. The side button closest to the tip is equivalent to a right mouse button. The side button farthest from the tip activates the eBeam menus. For normal usage, only the tip should be necessary.

2. Clear All.

When you are finished with the digital whiteboard, you can clear the screen by tapping the clear button on the main toolbar. The clear icon will be greyed out unless there is something on the screen to clear.